

CRENSHAW (E. A.) A

SHORT ACCOUNT
OF THE
MOTIVE-POWER OF MAN
TOGETHER WITH
THE SYMPTOMS AND TREATMENT
OF
DISEASE.

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PREFACE.

THE following Treatise was at first prepared for, and published in numbers, in the "YORK DISTRICT CHRONICLE." I afterwards determined to publish the same in pamphlet form.

The object aimed at in this short Treatise, is, to show that the living man is an Automaton; or *self-mover*, by the instrumentality of *Electricity*, under the directing power of *LIFE*, according to the laws which God has prescribed to nature. And that this power bears its sway over man, and preserves him in a state of health, until some power stronger than this is brought to bear upon him, productive of disease, and death.

Further. That when the citadel of health, and life is assaulted by disease, that then, there is a want of balance in the *two* currents of electricity; and that this may be known at any time, by means of pressure along the spine; and the character, and location of the diseased action may be invariably known, and pointed out thereby; together with appropriate treatment, by which to regain an equilibrium between the currents, to the restoration of perfect health in all the curable cases.

E. A. C.

ANIMAL MOTION.

NO. 1.

THE *forces* elicited from different kinds of matter, and known to the learned by the name of Electricity, Magnetism, and Galvanism, are now believed by scientific men to be the same thing; their effects being only varied by common causes: and there can be no doubt, that those forces are innate in every kind of matter, either in an organized, or unorganized, state; in quantities proportioned to the density of matter, or other ability to retain them: the quantity obtained from one drop of water having been found sufficient to put a small battery in *motion*.

The phenomena which constitutes animal life, has always been a puzzle to the wise men of this world. Nor science, nor speculation has enabled them, even to approximate with accuracy, the subtle principles which are the springs of *motion*; and which regulate the actions of animal life. Yet the Philosopher entertains not a doubt, that these actions are dependent on laws, as diffusive, and as comprehensive in character, as are those of gravitation, electricity, magnetism, &c. We are told by the Author of life, that "God breathed into man the breath of life, [or lives] and man became a living soul," so that, "in the beginning" matter was first organized, and life was superadded by God himself; and thenceforward all nature became obedient to the law which God proclaimed; and all the *motion* which we behold in man, is but obedience to fixed law, as unchangeable as is God himself.

On surveying the human body, we find it covered with a complex structure, called the *skin*; having minute rounded bodies, called papillary glands; organized, having minute arteries, and veins in their structure. These have also minute ducts, with orifices opening on the surface of the skin. On examination of the internal organs, viz:—the brain, eyes, stomach, cystis, uterus, kidneys, pancreas, liver, spleen, lungs, heart, and intestines, we find them all covered with a sort of skin, or, serous membrane,

having innumerable minute glands, with ducts opening on the surfaces of these membranes. These all secrete a watery fluid, which serves to moisten these surfaces at all times, in health.

On turning our attention to the membranes, which line the *inside* of the body and organs; these (with some modifications) are the same in structure, as are the serous membranes; having a *villous* coat, instead of a *serous* surface. So also, of the whole tract of the alimentary canal, including the mouth, oesophagus, stomach, and intestines; so also, of the internal part of every organ in the human body, even the ventricles of the brain. This *villous* coat, or mucus membrane, has innumerable glands, which glands have arteries, veins and ducts, with orifices opening on this villous surface. There are also many small cavities, and follicles, opening on this surface, which contain a semi-fluid, or mucus substance which issues from them, and spreads upon these membranous surfaces.

Here we have in the animal man, *two* different kinds of surfaces, disposed in *two* different ways, and covered with *two* different kinds of fluids. The Philosopher can not fail, here to see in this arrangement of things, an evident *design* on the part of the God of nature, in thus ordering, and so disposing these different parts, to answer an important and inalienable end.

It is ascertained, that the excretions from the skin, and all the serous membranes, are more or less *acid*; and that the excretions from all the mucus membranes, are more or less *alkaline*. The acid is ascertained to be *muratic* acid, and the alkali is found to be *soda*, and *muriate of soda*, or, common salt. The acids, and alkalies, possess directly opposite properties, yet, these have the strongest affinities for each other, and are universally diffused in all the earth, as well as in the animal, and vegetable kingdoms of nature.

The *acids* and the *alkalies* constitute *two* great, and principal divisions of matter, in all the world. The

acid is called *negative* matter; and the alkali is called *positive* matter. Each of these different kinds of matter, constantly gives out an inherent, and different kind of *force*: The alkaline, or positive matter, gives out the *negative* force; and the acidified, or negative matter, gives out the *positive* force. The internal surfaces of the body, and organs, are constantly—(when in health)—giving out the *negative* force; and the external surfaces of the body, and organs, (in health) are constantly giving out the *positive* force. The whole is a most perfect model of an electric battery.

It is known, that there are in the human body, four hundred and thirty-six muscles, called into action, in order to *motion* in all its parts: these are the flexors, and extensors; for in every motion there is flexion, and extension; and of consequence, there is a contraction, and a corresponding expansion in the muscles concerned; and thus *motion* is produced, by the simultaneous action of these pairs of muscles, and not otherwise.

Each one of these four hundred and thirty six muscles, which are called into requisition in animal motion, is covered with membranes, having two surfaces; the outer surface is *serous*; the inner surface is a *mucus* one; the serous surface excretes a watery substance, and the mucus surface excretes a slimy substance; hence their membranes are called mucoserous membranes. Their surfaces are at all times, (in health) covered with different kinds: viz.—*positive*, and *negative* forces—electricity.

This arrangement of surfaces in the human body, corresponds with that of the two metallic surfaces of a Galvanic battery; and the forces thus maintained on these membranous surfaces, correspond with those maintained on the different surfaces of a battery. The two electric forces, are conducted from the two metallic surfaces, (the copper and the zinc) to the poles of the electric battery; by two metallic wires.

In man the two forces are conducted to the *brain*, by means of the nerves, from all the surfaces of the human body. These forces are conducted from the skin, and membranous surfaces, and concentrated in the brain, to form *poles*; or, a motive-power, in conjunction with, and subservient to the motive power *LIFE*; to give to man his *motion*, in conception, perfection, and decline.

NO. 2.

In a former number, (1) the animal body of man was in some measure, shown to be an animal-electrical-battery, capable of self-generating power of magnetism, or electricity, in *quantum* sufficient to originate, and perpetuate *motion* in itself, when endowed with *Life*. And now I proceed to say—

Human Anatomy teaches that the limbs, the spinal cord, and its connexions with the internal organs, are replete with nerves; all of which are known to be good conductors of the electrical forces.

It is also a well established fact, that the human brain is naturally divided into *two* hemispheres, the whole of which presents a convoluted surface on the upper and outer part. The general form of which

convolutions are regular, and constant to *one* design; yet different in the different hemispheres. The one is the *positive*, the other is the *negative* hemisphere; just as the copper and zinc surfaces in a galvanic battery are. The *under* surface of the brain is also a complicated structure, surrounded by convolutions. On removing a section of this *under* surface horizontally, there are seen vegetative radiations, from the *centre* of both lobes of the little brain: radiations also extend from the third ventricle. Other radiations are also seen at the front part of the brain, converging to centres. At another dissection of the brain, are seen radiations from the third ventricle, into the substance of the brain; and along the medulla oblongata, and spinal cord, and the convolutions in the front part of the cerebrum; these radiations are seen to converge to centres also. By dissections, radiations are seen extending along the spinal nerves, which are connected with the internal organs.

In a vertical section of the entire brain, so as to expose the left side of the cavity of the third ventricle, radiations are seen to extend from the surface of the ventricle, into the substance of the brain; and here in the central part of the brain is a *bluish-white* color; and in the convolutions is a *reddish-grey* color; both of which colors indicate the presence of *iron* in the parts. It is found also, that in forty (40) men, there is iron enough, to make a plough-share. And, inasmuch as there is ten, or eleven times more blood, (which is colored red with iron) thrown to the brain in any given time, than is thrown to any other part of the same size, it evinces an amount of iron always present there (in health) sufficient to maintain magnetic poles.

It is found, that the human brain has *five* magnetic poles, although we are acquainted with only *two* metallic-magnetic poles. The existence of these *five* poles, and the *laws* of magnetic action being known, certain, and unalterable, an obedience to which laws, gives to the skull of man its rounded shape, as well as the elevations, and depression found in the human skull, indicative of the endless variety of talents, dispositions, &c. found among men, modified by whatever influences may be brought to bear in the given cases. For although it is found, that attractions do contract, and repulsions expand bodies, they do attract, and repel each other, with a force *proportioned* to the quantity of these forces, in given spaces; or, the spaces they occupy.

The two poles of the *same* denomination, in the *opposite* hemispheres of the brain, do through the spinal nerves attached to these hemispheres, expand *one* set of muscles on *one* side of the body, limb, or organ, at the same time that those of the *opposite* denomination do contract the antagonist muscles, on the *other* side. For the muscles, as well as the organs are double, for the purpose of producing motion by their simultaneous action.

Moreover, Man, at *will*, may *expand* one set of muscles, by the *repulsive* force of electricity, and *contract* the antagonist muscles, by the *attractive* force of electricity. As when by the exercise of *will*, or inclination in man, excited by a sensation, we *incline* to expand *one* set of muscles, in order to extend a limb; we at the same time *incline* to contract their

fellows; so that, when one muscle expands, its fellow necessarily contracts; and when one contracts, its fellow expands; and thus by alternate attraction, and repulsion by the forces, contraction and expansion is produced in the muscles alternately; and this alternate contraction, and expansion in the muscles, produces alternate extension, and flexion, or relaxation in body, limb, or organ, as the case may be; which alternate flexion, and extension; constitutes *animal motion*. And these motions in animals are originated, and sustained by the action of the *positive* and *negative* magnetic or electric forces, generated or received in the *living* system itself; which system had its origin, by this very means, associated with, and superintended by "the breath of *Lives*," endowed at first of God.

NO. 3.

In the preceding numbers of this article, the locomotive-power of man has been affirmed to be derived from electrical currents, of a *positive* and *negative* character; generated in the body, proceeding from the *mucus* and *serous* surfaces; and conducted to the brain &c., by means of the nerves of the various parts; in subservience to, and co-operating with another motive power in man viz: *LIFE*—to give efficiency, and direction to these currents of electricity, in order to be productive of *animal motion*. I now proceed to say:

It is found by Anatomists, that the *internal* organs of man, viz:—the brain, heart, stomach, lungs, intestines, liver, spleen, kidneys, uterus, and cysts; all are covered *externally* with *serous* membranes; whilst their *inner* surfaces are lined with *mucus* membranes. And when we consider the *forces* necessary to be bestowed on the heart, in order to carry on the arterial circulation of blood, we find it furnished with strong muscles; which muscles are surrounded with membranes, affording extensive surfaces for the accumulation of the *positive*, and *negative* electrical forces, needed in the process of circulation, viz:—*attraction*, and *repulsion*.

The action of the heart is on the principle of *attraction*, and *repulsion*; produced by the operation of the positive and negative currents of the electrical forces, generated by the serous and mucus surfaces in the man; and *not* on the principle of a water-pump by exhaustion, or vacuum, and pressure by foreign power. The fluids are *attracted* through the veins, and absorbent vessels, to the heart, equal in power, to that with which they are *repelled* by the ventricles of the heart, through the arteries, and capillaries, to every part, and out of the body.

Every *repulsion* of a fluid, in *elastic* bodies, produces expansions in those bodies; and every *attraction* of a fluid, in *elastic* bodies, is followed by contractions in those bodies, agreeably to a settled law of these forces; viz:—Repulsions *expand*, and attractions *contract*, with powers proportioned to their quantities in the given spaces they occupy. Of consequence.—

Every repulsion by the heart, pushes the fluids in the arteries; and every attraction pulls the fluids in the absorbent vessels, and conveys them to the

heart to be from thence repelled. And thus is performed, in ceaseless round the process of the circulation. The motions of the pulse corresponds exactly with this law, and with these motions; for every repulsion, is followed by an *expansion* in the arteries; and every attraction, is followed by a *contraction* in them.

If the heart be laid open with a knife, and distended in a circular manner; it is found, to have *four*, large magnetic poles in its circumference; and this is shown by it's structure. The magnetic axis, of these magnetic poles, cross each other in the centre of the heart; as is done also in the brain, and in the like manner. The magnetic powers from the poles of the heart, radiate along the ligaments, or braces, to the sides of the ventricles; the forces also radiate from the poles in the auricles, along their ligaments; all of which are first *expanded*, and then *contracted* (in the motions of the heart,) by the electrical action of the magnetic forces from the poles; according as the *positive*, or *negative* currents are expended. And any inequality, and variation from the healthy standard in the beatings of the heart, is only to be explained, by the *accumulation*, and *expenditure* of one or both of these magnetic powers. And thus does the action and motions of the heart continue, so long as these magnetic powers are generated, and equally distributed; and this is done, in a more or less perfect manner, so long as *life* holds its empire over the citadel which it has constructed, against the invasions of the *chemical* powers, or other violence.

We have before us, a system formed for the purpose of *motion*. The excretions are *attracted* from the blood, and then *repelled* from the body; chyle is *attracted* from the mass in the intestines, lymph from the by lymphatic glands; fluids from every cavity, and conveyed to the heart. We have a *formative* system, in which fluids are *attracted* to the centre of the body; and a *motive* system, by which they are *repelled* from it; by means of which, the body grows, and supports, and supplies are furnished for the waste; and all to maintain the different surfaces in *positive* and *negative* states, for the purposes of *motion*.

This system consists of a vast number of small vessels, having open orifices, in nearly every part of the skin, and in the serous, and mucus membranes; and in the cavities of the body. These small vessels, pass into, and out of a great number of glands, which attract the fluids from the blood, and intermix these with other fluids of their own.

The lymph, secreted by these glands (in health) is very thin, at the natural temperature of the body; but, does however thicken in abnormal conditions of the body; and then its circulation in more difficult, and even in some glands totally obstructed; when there is an accumulation in such glands, and a consequent unnatural *expansion*. Some glands become hardened down, and resembles (when cut) old cheese. Such diseased gland, presents in appearance, a conglobate arrangement of the acini, or grown-together parts; and the organization in such cases, is *not* without design; but is geometrical in its figure and compares well with a conglobate

form of *snow*, which is constructed geometrically in the atmosphere, by the same *electrical power* that produces *motion* in the gland.

There are two classes of these glands, in regard to size, and situation; which are connected with the brain, through the spinal cord, by the nerves of *sensation*; whilst the mucus glands, of the mucus, and muco-serous membranes, are connected with it, through the same channel, by the *motor* nerves, or nerves of *motion*.

On examination of the fluid, which has passed through these glands, on the way to the heart; it is found to contain very many small round bodies, of a white color; which accumulate in the blood, and form its globules. And as every part of the body is made up of minute round bodies, connected together with a connecting substance; so, these are formed in these conglobate glands, after the pattern of their acini; and are secretions, having a *positive* character of electricity.

These *positive* secretions, along with the chyle, are *attracted* from the intestines to the heart; and then *repelled* from it, through the arteries, to be deposited during sleep, for the renewal and growth of the body, as well as for supplying the excreting system of vessels, with the necessary fluids for excretion; and the secreting system for secretion.

A full, and constant supply of these round elementary bodies, and connecting substance, is necessary to maintain the body in a healthy state; and inasmuch as the supply through these glands is liable to interruptions, the *spleen* is constructed with acini, to secrete the same fluids, for the exigencies of the body.

The Liver is also provided, to separate the superabundance of *positive* matter, and the kidneys to separate the superabundance of *negative* matter, whensoever men eat, or drink more than is necessary, to supply the wants of the secreting, and excreting systems; or more than they can secrete, or excrete; otherwise, the body might be over-loaded with matter, and motion of consequence must cease.

The *positive* matter there excreted from the liver, is accumulated in the gall bladder, and thence passes into the intestines, to be mixed with other *positive* matter there; but, the *negative* matter excreted by the kidneys, is accumulated in its bladder, and conveyed off in another way, and manner. So that, the *positive* matter from the liver, and intestines; and the *negative* matter from the kidneys, are kept separate, and dismissed from the body, by different ways; otherwise, harmonious action would be lost.

Electricity, magnetism, and galvanism is an *unit*; their effect being only varied by common causes—is innate in every kind of matter, in quantities proportioned to the *density* of the matter; or other ability to retain it. The quantity obtained from one single drop of water, being found sufficient to put a small battery in motion.

Electricity; or, Magnetism, in its *positive*, and *negative* forces; is the agent by which all animate nature is put in motion; the sun, the earth, moon, stars, planets and their satellites are also thereby moved in their orbits, with unerring precision; and there is *never* any motion, without the action of the positive, and negative forces at the same time.

NO. 4.

CONCLUSION.

The subject of Animal Motion is here *re-assumed*, as a proper conclusion to what has gone before; in order to show the *uses* to which the foregoing knowledge may be profitably applied.

The knowledge of the construction, and of the motive-power of the human body may be applied to *two* important ends, viz: The discovery of the *presence* of disease in the human body, together with its character, and location; and the natural mode of *treatment*; or, correct remedies adapted to the cure.

1. Of the *presence* of disease, its character, and location. All the forms of disease incident to man, and which are the outlets of human life, are properly arranged under two classes, viz:—*Serosis*, or disease of the serous membranes; and *Mucosis*, or disease of the mucous membrane in the human body. In any examination for diseased action, the practitioner need only make firm pressure with his finger, or thumb, on each side, and on the whole extent of the spine, or back-bone, from the skull to the coccyx bone; and if there be any degree of *pain*, or *soreness* felt under the pressure so made, it is incontrovertible evidence, that diseased action is present in the system; and is in character a *serosis*. And the location is settled by the *part* of the spine, where the pain, or soreness in pressure is *felt*.

The spinal column, or back-bone, is conveniently divided for reference into three denominations, or parts, viz:—the Cervical, or neck proper, the Dorsal, or back proper; and the Lumbar, or loin regions. To the Cervical, or neck portion is appropriated the *seven* uppermost joints or vertebrae; to the Dorsal, or back portion is appropriated the *twelve* next lower joints; and to the Lumbar, is appropriated the next and lowest *five* joints, which comprehend the whole column.

In the intervertebral spaces, or between each and every one of these joints, the pressure is to be made, and the pain, or soreness felt on pressure made on the sides of first cervical vertebra, indicates tubercula of the head—cerebellum, cerebrum, membranes of the brain, throat, nose, eyes, or ears.

When the same is felt, on pressure on the sides of 2d, 3d, 4th, 5th, 6th, and 7th cervical vertebrae, it is indicative of tubercula of the muscles; or, of the vertebrae itself; or, of the joints or the limbs.

Where the same is felt, on pressure on the sides of the space, between the 7th cervical, or last joint of the neck, and the 1st Dorsal, or back proper, it indicates tubercula of the lungs, or heart. Pain, &c. on pressure on the *right* side, indicates disease of the lungs; and the same on the *left* side, indicates disease of the heart.

Pain, &c. on pressure between the 1st and 2d Dorsal joints, shows tubercula of the stomach.

Pain, &c. on pressure between 2d and 3d Dorsal joints, shows tubercula of the Duodenum.

Pain, &c. on pressure between 3d and 4th Dorsal joints, shows tubercula of the colon.

Pain, &c. on pressure between 4th and 5th Dorsal joints, shows tubercula of the Pancreas.

Pain, &c. on pressure between 6th and 7th Dorsal joints, shows tubercula of the Omentum.

Pain, &c. on pressure on the *right* side of the space, between the 7th, and 8th, Dorsal joints, shows tubercula of the liver; that on the *left* side shows tubercula of the spleen.

Pain, &c. on pressure between the 8th, and 9th, Dorsal joints, shows tubercula of the diaphragm.

Pain, &c. on pressure between the 9th, and 10th, Dorsal joints, shows tubercula of the Peritoneum.

Pain, &c. on pressure between the 11th and 12th Dorsal joints, shows tubercula of the small intestines.

Pain, &c. on pressure between the 12th Dorsal, and the 1st Lumbar joints, shows tubercula of the kidneys.

Pain, &c. on pressure between 1st, and 4th, Lumbar joints, shows tubercula of the uterus, ovaria, prostate glands, vesiculæ seminales, and testes.

Pain, &c. on pressure between 4th Lumbar joint, and the os-coecyx bone, shows tubercula of the vagina, &c.

When *Serosis*, or disease of the serous membrane is in the *acute*, or, active stage, the pain, or soreness on pressure, is acute, or pungent; and is felt also in the organ diseased, as well as under the thumb; but, when it is in the *chronic* stage, the pain, or soreness, is obtuse, or very little; and felt under the thumb only.

Here is shown the natural, and scientific

symptoms of this form of disease; and they produced by natural causes, and are invariable.

In all the cases of *Mucosis*, or, disease of the mucus membranes, (as Bronchitis, &c.) there is an *absence* of all the above symptoms of *serosis*; and the presence of *Mucosis* is made known by the exaltation, congestion, and depression of the system, by means of the common, or popular symptoms, as are described in the books of systematic writers, already accessible to all persons, and need not be here detailed.

In the last stage of all *serosis*, or disease of the serous membranes, the motion ceases in these organs; or death ensues; when, it is found that these organs are all enlarged, thickened, or swelled; and their specific gravity is increased. The primary lymphatic glands attached to the organs, with the subsidiary glands in their substance, as also those of the series along the sides of the spine, with their satellites connected with the organs through the spinal nerves, are tuberculated. This is the cause of the symptoms in *serosis*.

The frequent changes of the atmosphere, from the *positive* to the *negative*, states, and its modifications at the same time by heat, and cold, is a common cause of tubercules of the organs and limbs; because these changes and modifications of the atmosphere, produce corresponding changes in the positive, and negative states of our bodies; and modifications of the secretions, and excretions.

When the organs, or limbs, are tuberculated from this cause, they are more or less sensible to pressure, because it *contracts* them, and when the pressure made is removed, they *expand*, and the pain ceases. So, where the atmosphere is damp, and cold, it is in a negative state; and the attractions, and contractions, are prevailing over the repulsions and expansions; when, such patients suffer more pain, and feel more dull, and heavy, than they do when the atmosphere is clear, dry, and in a positive state. When the atmosphere changes from the positive to the negative state, the body changes at the same time with it, from the positive to the negative state. When attractions, and contractions are present in tuberculated organs, or limbs, dull, and aching pains prevail, until the atmosphere changes from the negative, to the positive state, when the pains cease.

2. Of the natural mode of *treatment*; or, correct remedies, adapted to the cures. Ac-

ding to the laws of motion, by which the living body is governed,—repulsions expand, and attractions contract. If then, an organ is increasing in size, the repulsive, and expansive force in the organ, &c. is prevailing over the attractive, and contractive force. The indication of cure then is, to cause the attractive, and contractive force, to prevail over the repulsive, and expansive force; and *vice versa*. Nature often does this by the changes in the weather, and the seasons of the years. On learning the natural constitution of material things, we find that there are *two* great divisions in Nature. one of which has a contractive force; and the other has an expansive force; these are the *acids* and the *alkalies*. Chlorine, combined with other negative matter, has a strong power of contraction; whilst soda, united with other positive matter, has a strong power of expansion.

The treatment, therefore is, to convey to the tuberculated organs, or limbs, constantly and

steadily, a harmless, negative matter, in quantities sufficient to make the attractions and contractions in the organs, and limbs, prevail over the repulsions, and expansions, and *vice versa*. And thus cure disease in the first stage, as uniformly as it is produced, in a very short time. And in a longer, or shorter time, to cure all the cases which are within the reach of remedy. As to the choice of individual articles, and the proportions in combinations; physicians are left to exercise their own ingenuity, whilst their *Materia Medica* comprises only acids, and metals, gums and alkalies; an electrical apparatus, and Animal Magnetism, so managed as to evolve in the proper quantity, when administered, the *positive* and *negative* forces, required for the *excess* or *deficit* of either in the human body; and thus produce, and maintain an equilibrium between the *forces*; which equilibrium between these *forces* will be evinced by an equilibrium in the circulation, and nervous action; which is a state of health.

THE END.